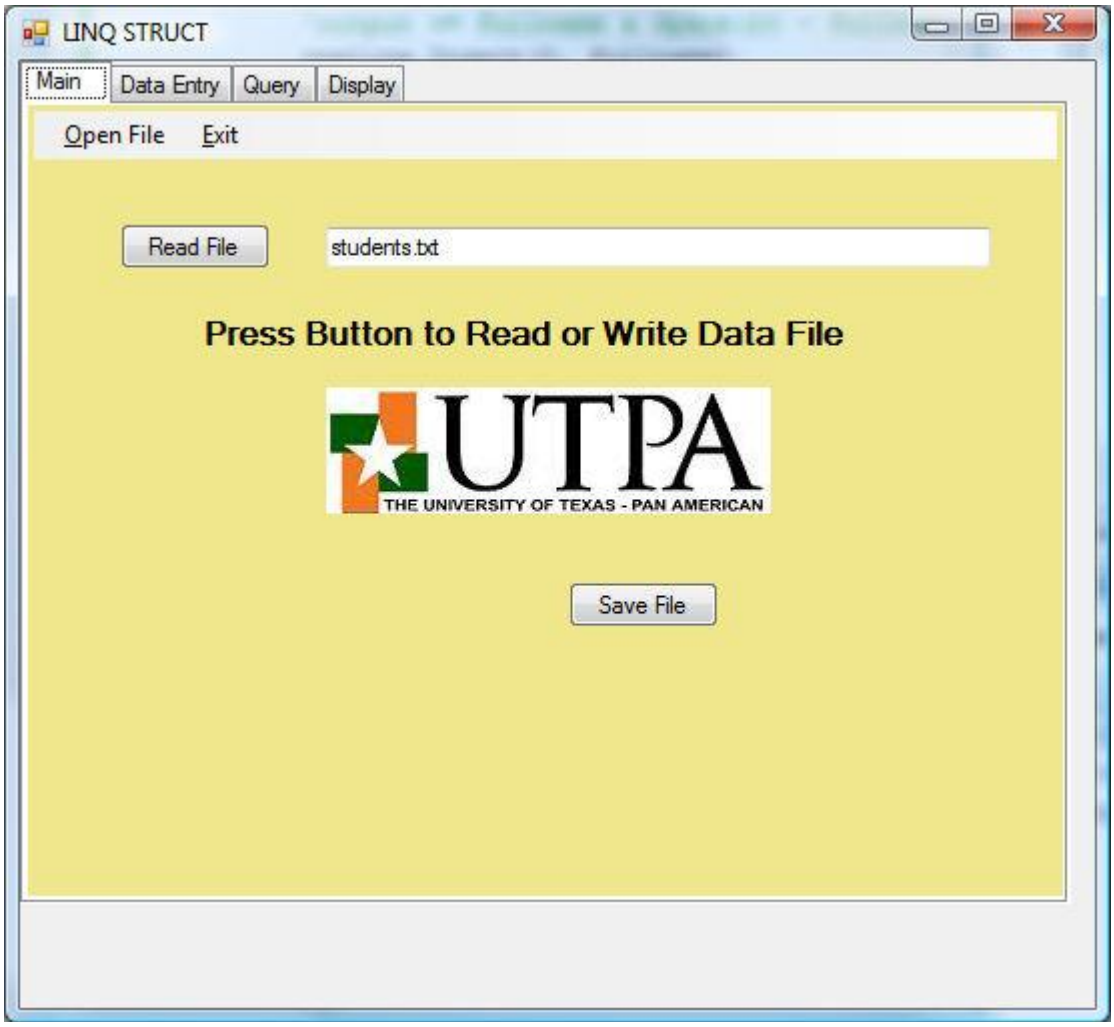
CSCI 3327 Visual Basic (Fall 2011)
Assignment #9

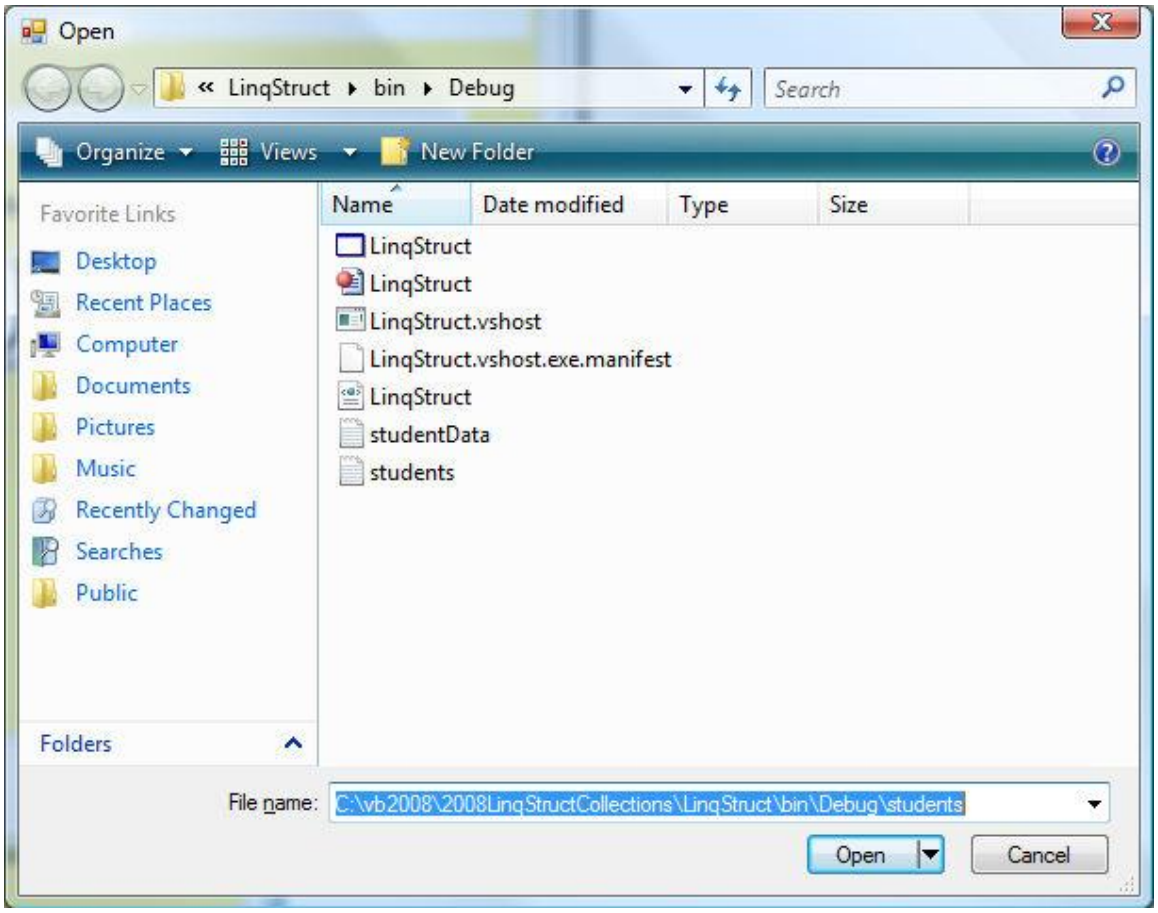
Instructor: Dr. Xiang Lian
Due Date: See the course website

This is a pretty long assignment, so please start early. Instructional objectives of this assignment are:

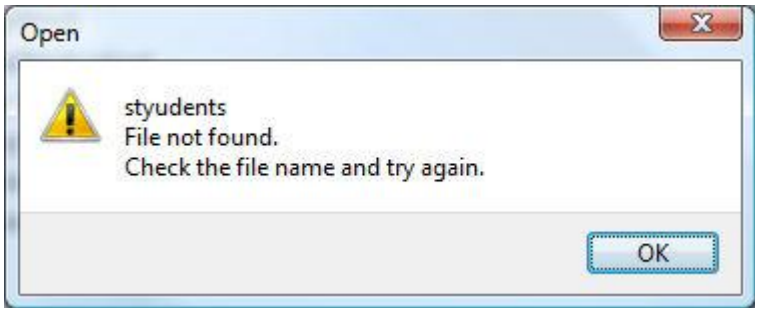
- Files and Streams
- String Builder class
- Arrays of Struct
- Error Handling
- Collections
- LINQ
- Sorting and Binary Search

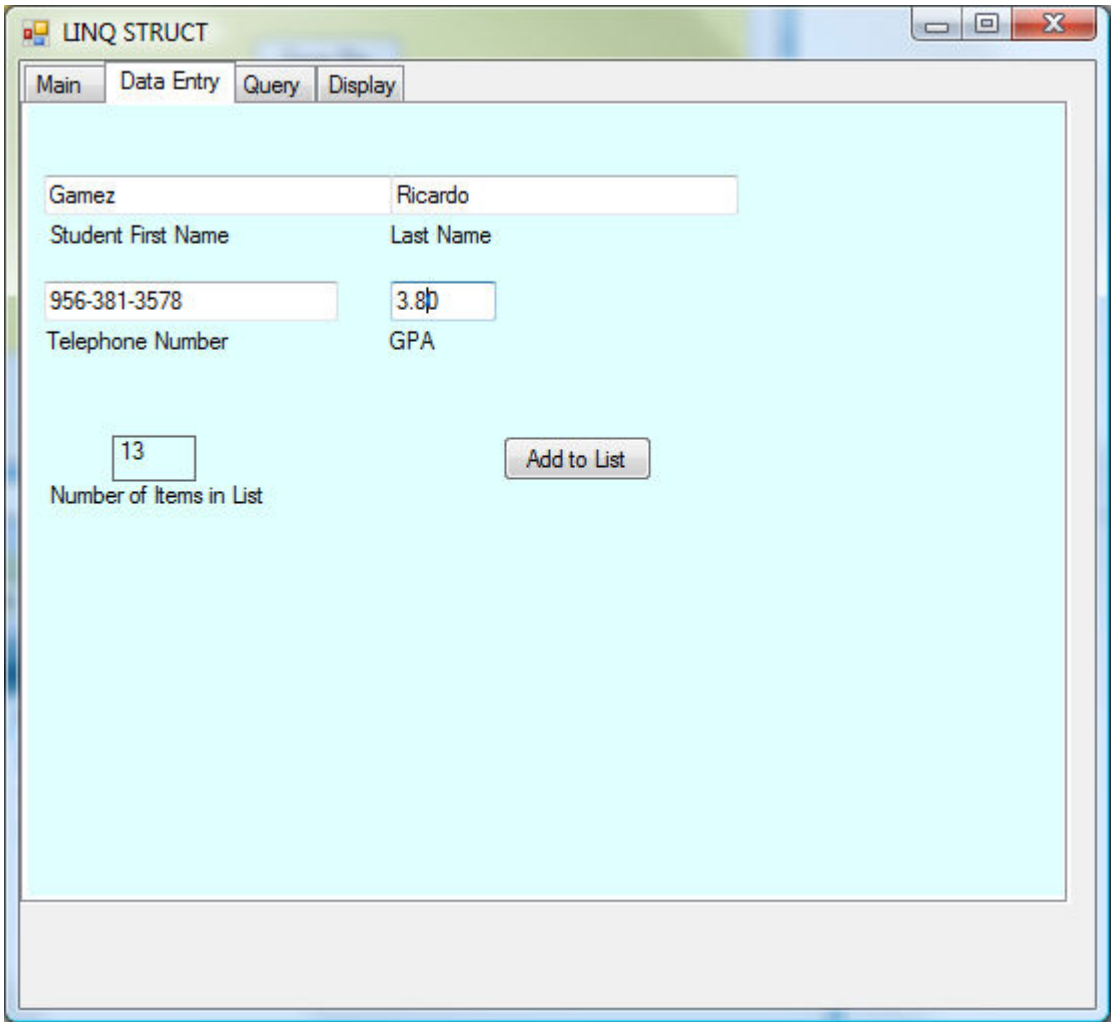
Create a form with four tabs, name the tabs appropriately, add Menu Strips to handle files and whatever else you want to do, add records for several students and save them to a file.


LINQ STRUCT
Main
Data Entry
Query
Display
Open File
Exit
Read File
students.txt
Press Button to Read or Write Data File
UTPA
THE UNIVERSITY OF TEXAS - PAN AMERICAN
Save File

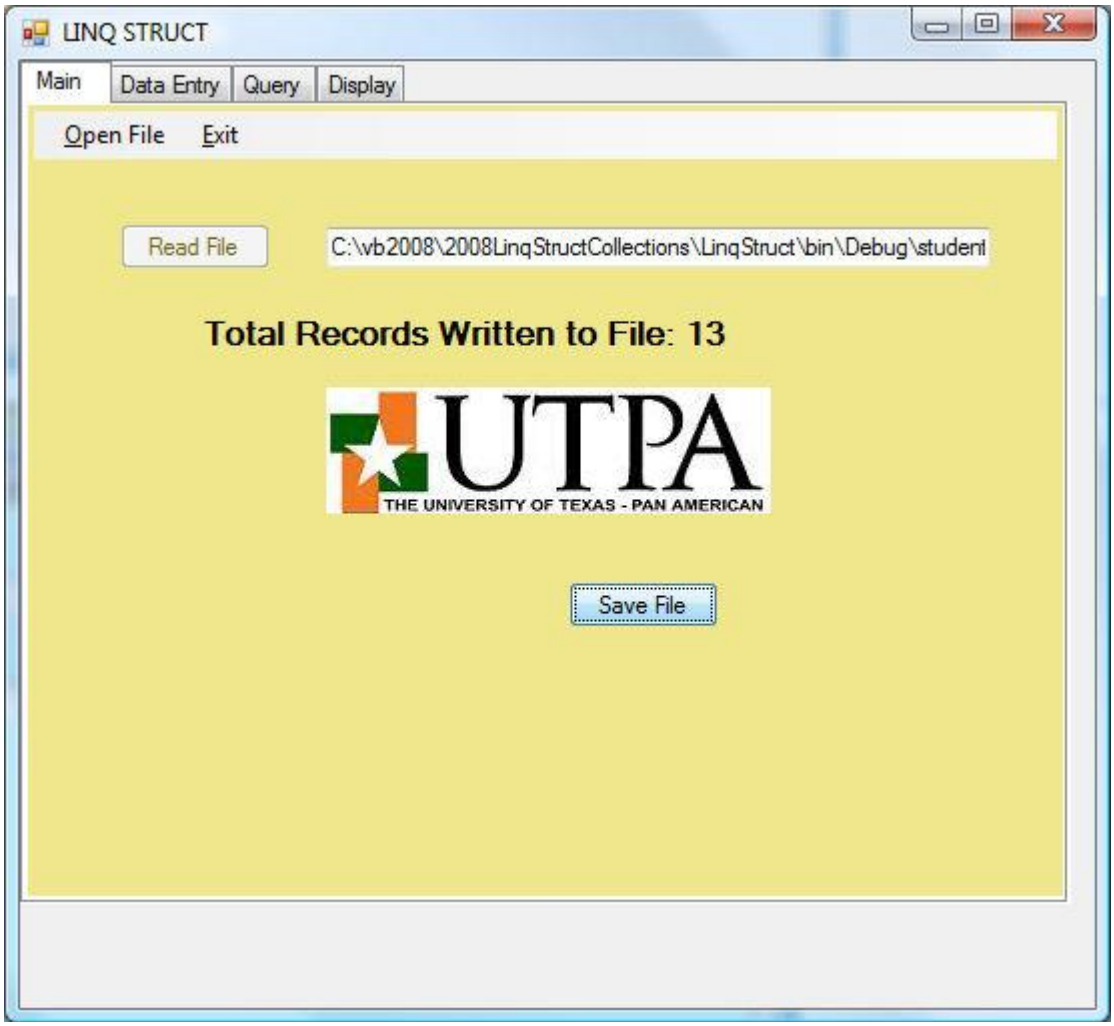


You get this screen the Open File (or Save File) Menu is clicked. Make sure this file name appears in the main form along with any messages. Add exception handling in this sub routine. Also please enable and disables buttons as necessary.

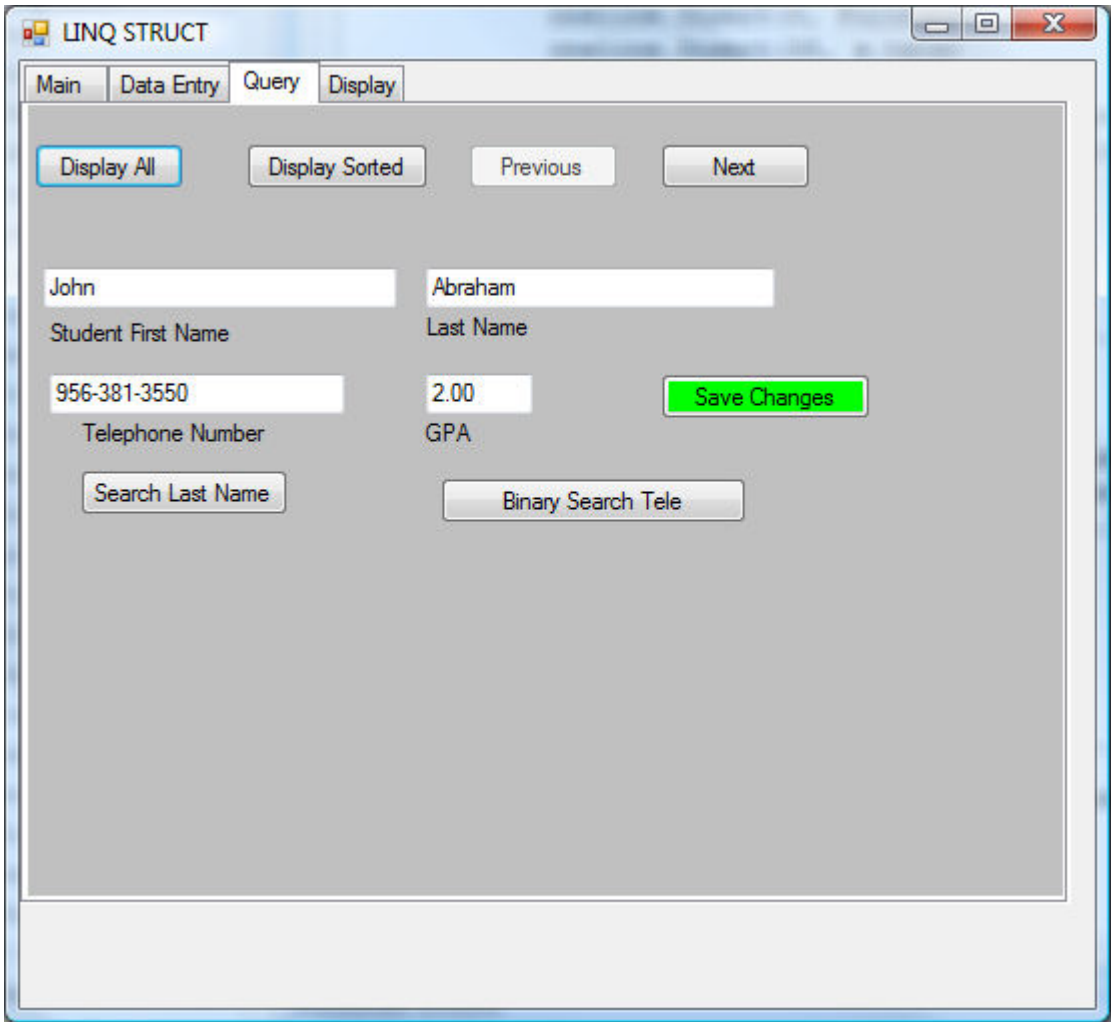




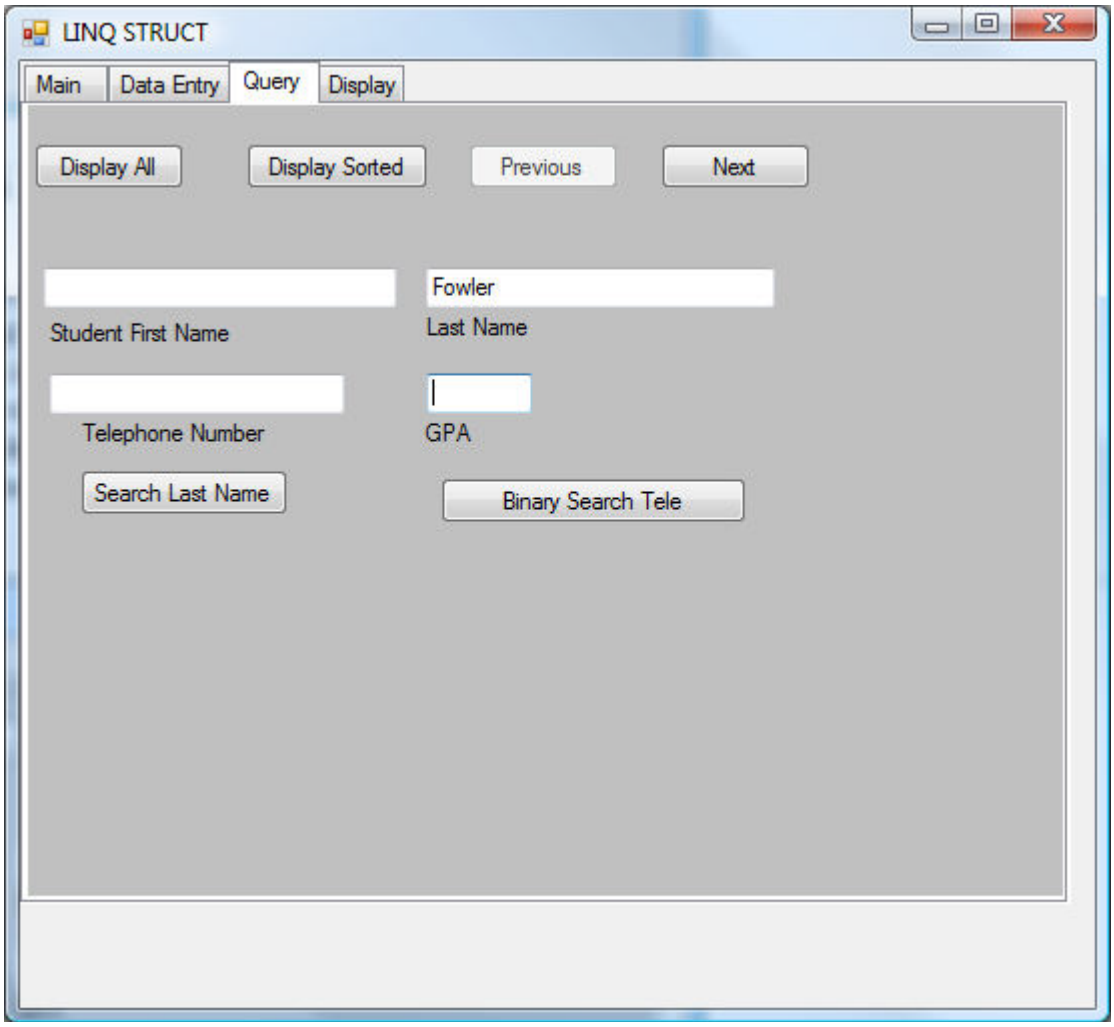
Each record is added to an array of struct. I used a generic collection called list instead of creating my own array. The list handles automatically re-dimensioning as the list grows or shrinks.

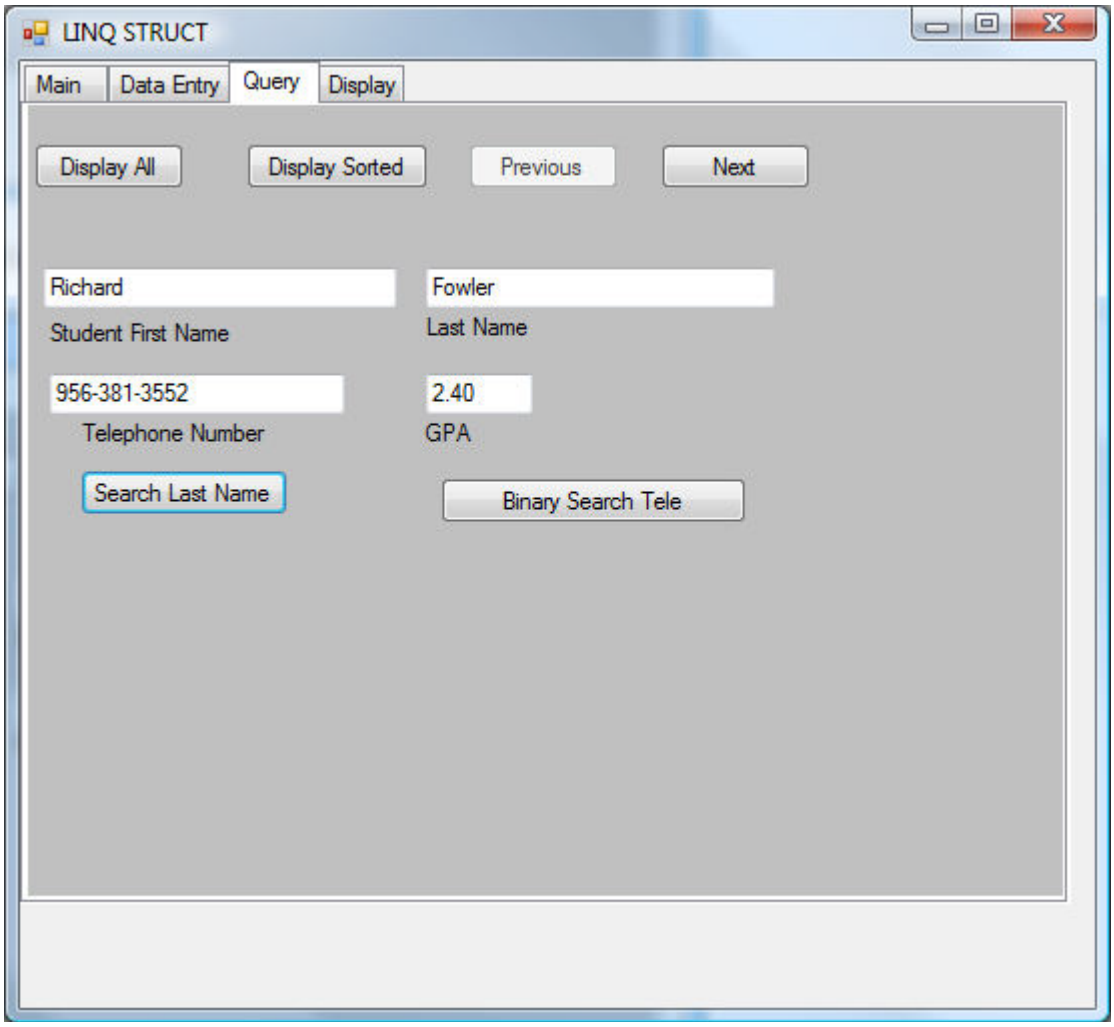


This portion deals with the third tab, Query. When you press the "Display All" button, the following screen is displayed with the first student's information. Please attention to the fact that the previous button is disabled and a new button "Save Changes" is visible. The later button should only be visible when changes can be made and saved. Clicking the next button should show each record sequentially. When the last record is reached the next button should be disabled and the previous button should be enabled.

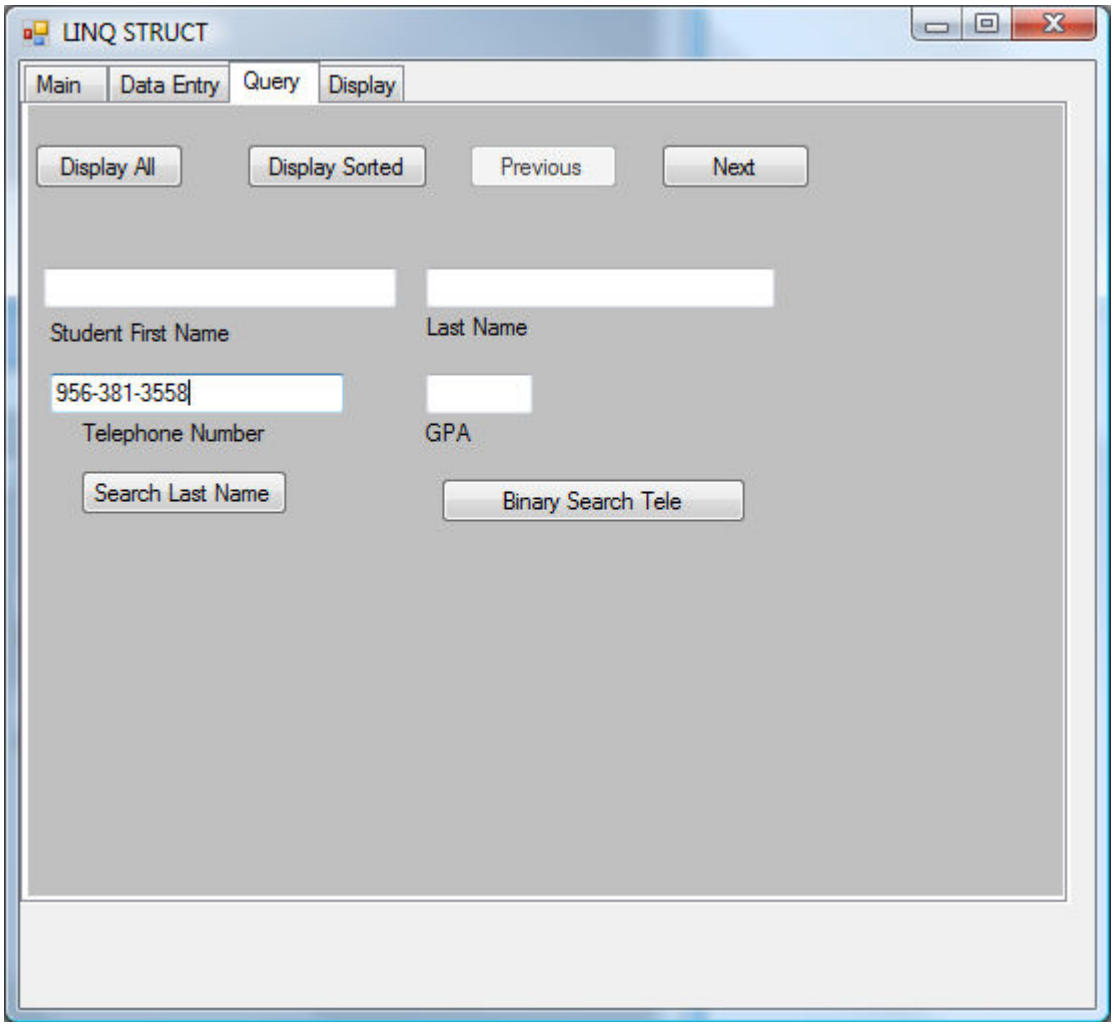


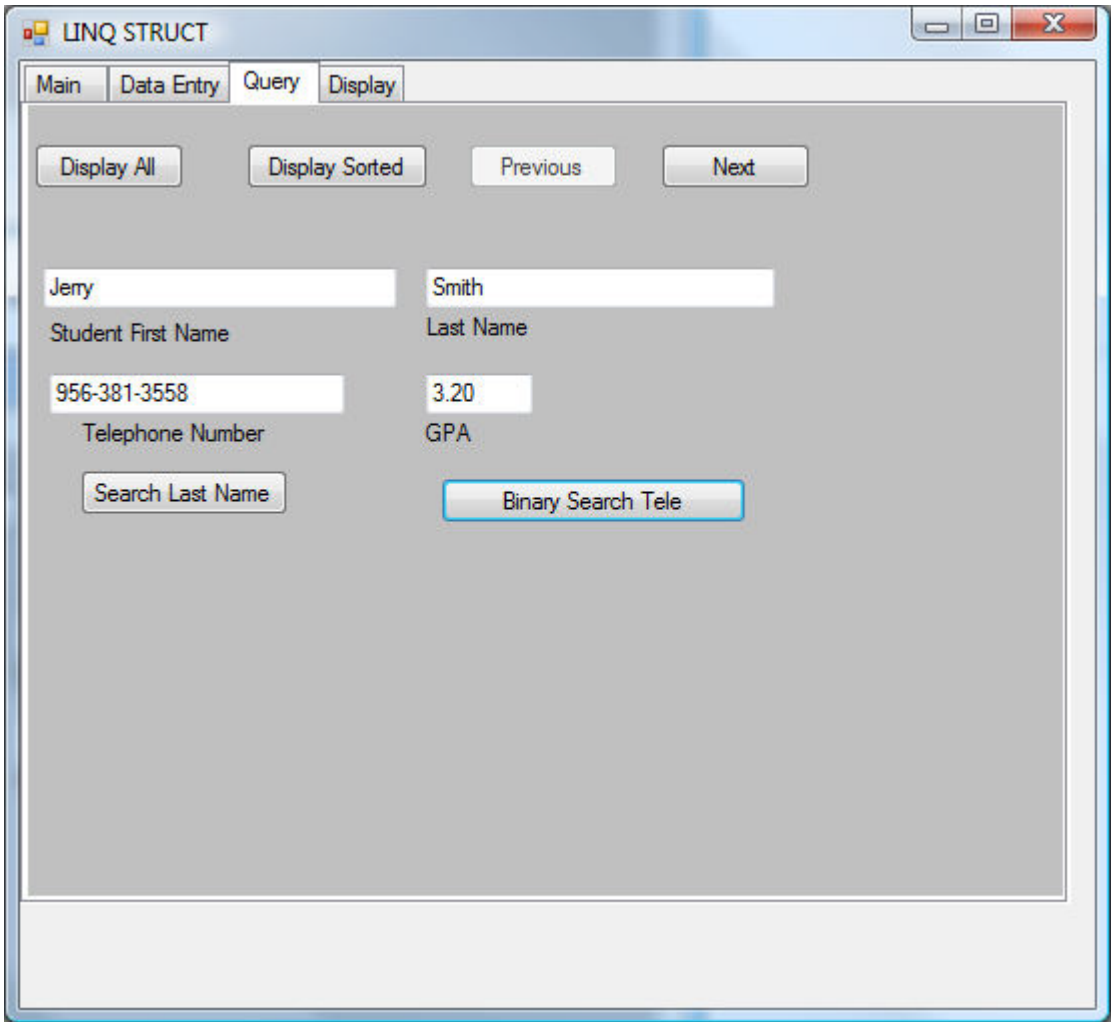
To search for a last name enter the last name and press search Last Name. We use a LINQ query to find the name.


LINQ STRUCT
Main
Data Entry
Query
Display
Display All
Display Sorted
Previous
Next
Fowler
Student First Name
Last Name
Telephone Number
GPA
Search Last Name
Binary Search Tele

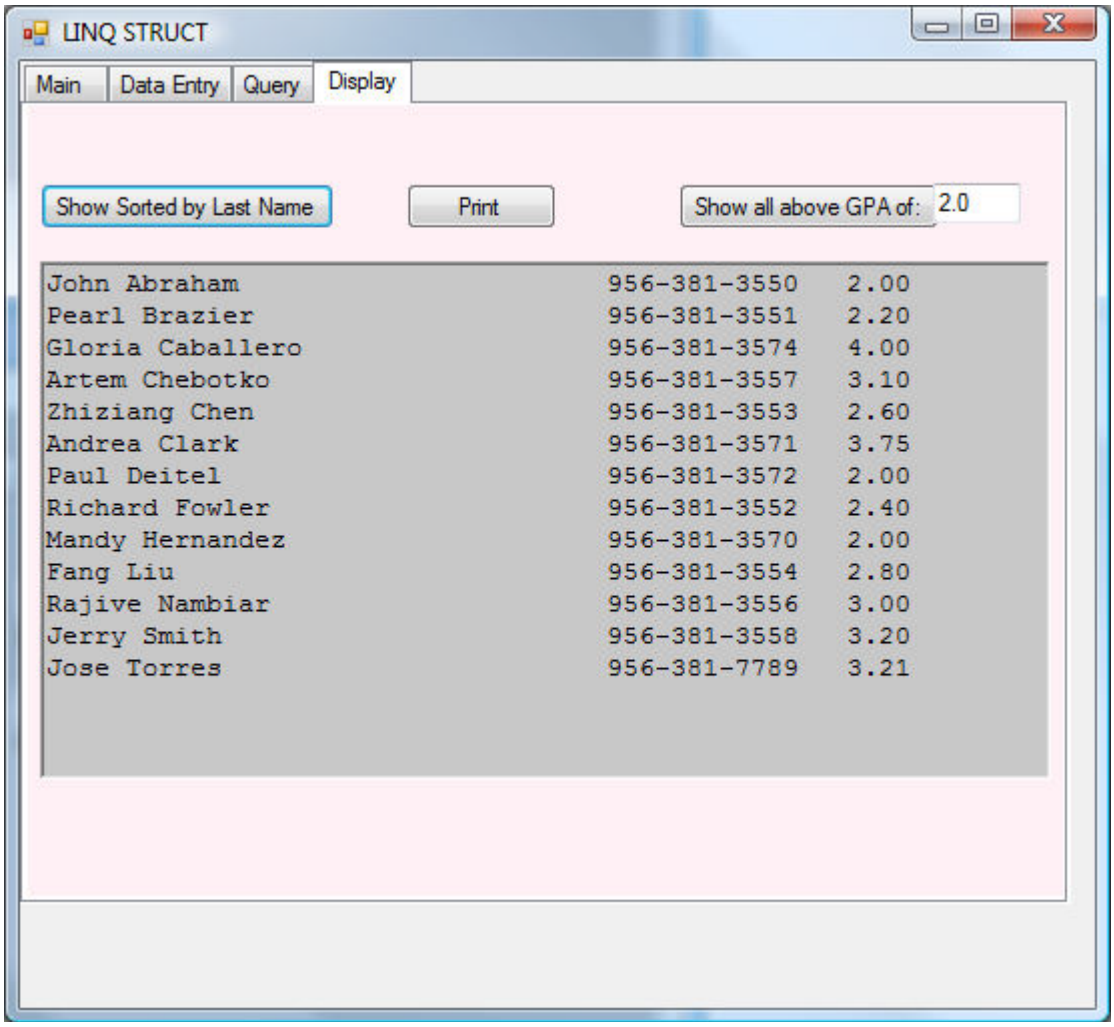


To do the binary search, the list is first sorted on telephone, and then a binary search is done.

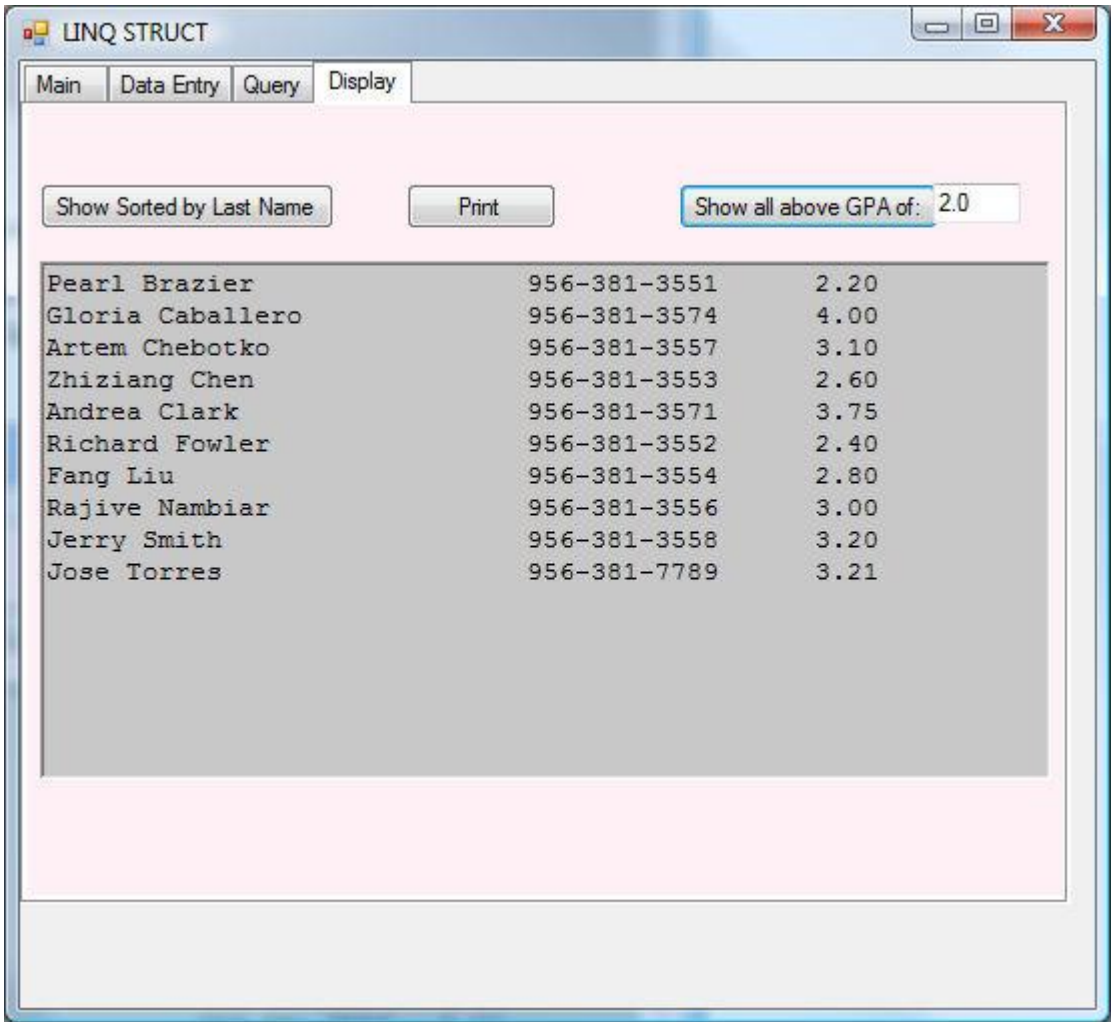

LINQ STRUCT
Main
Data Entry
Query
Display
Display All
Display Sorted
Previous
Next
Student First Name
Last Name
956-381-3558
Telephone Number
GPA
Search Last Name
Binary Search Tele



The last tab is to show the entire table. When "show sorted by last name" button is pressed, a sort is done based on last name and the list is displayed in tabular format using the StringBuilder class.



The last button is to show students above a certain GPA.



Please submit:

1. Program listing; and
2. The screen captures.

- Your program should begin with a comment section that would include the following:

PROGRAMMERS NAME:_____
STUDENT ID:_____
CLASS:_____ ASSIGNMENT #:_____
DATE DUE:_____ DATE TURNED IN:_____

- **Note:** ***Please send the files you created to Blackboard.***